

INFORMATION SYSTEMS DEPARTMENT

CITY OF MANCHESTER
New Hampshire 03101

REQUEST FOR PROPOSALS
IS-0602

January 20, 2006

NOTICE is hereby given that the City of Manchester will receive sealed proposals in the Office of the Information Systems Department, 100 Merrimack Street, City of Manchester, State of New Hampshire until 2:00 PM on Monday February 6, 2006 for the furnishing of the supplies, materials, equipment, or services, as indicated by the items hereunder listed in accordance with the applicable specifications:

Underground and Aerial Fiber Optic Cable Projects

Any name appearing on the Comptroller General's list of ineligible contractors for Federally-financed and assisted work is not an eligible Bidder. In addition thereto, a proposal based upon the furnishing of equipment or components thereof, manufactured by such an ineligible contractor, will be ineligible for consideration.

The Contractor will be required to comply with all applicable Equal Employment Opportunity Laws and Regulations.

All proposals are subject to the terms and conditions and specifications set forth in this Sealed Proposal Invitation.

The right is reserved to accept any proposal or any part or parts thereof, or to reject any or all proposals.

By: Diane S. Prew
Director of Information Systems

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I GENERAL TERMS AND CONDITIONS

A. Proposals - Where Received

Proposals will be received by the Information Systems Department of the City of Manchester, State of New Hampshire, at the place and until the time specified in the Notice to Bidders and then publicly read aloud for the information of Bidders and other properly interested who may be present either in person or by representative. NO PROPOSAL WILL BE ACCEPTED AFTER TIME AND DATE SPECIFIED.

B. Bidders Conference

A Bidders conference has been scheduled for the following time and location. Attendance is not mandatory but is recommended.

Friday January 27, 2006
11:00 AM
Information Systems Department
100 Merrimack Street
Manchester, NH 03101

C. Definitions

The following meanings are attached to the defined words when used in this proposal form:

1. The word "City" means the City of Manchester, New Hampshire.
2. The word "Bidder" means the person, firm, or corporation submitting a proposal on these specifications or any part thereof.
3. The word "Contractor" means the person, firm, or corporation with whom the Contract is made by carrying out the provisions of this Sealed Proposal Invitation and the Contract.
4. The words "firm price" shall mean a guarantee against price increase during the life of the Contract.

D. Submission of Proposal

Strict compliance with the requirements of the Notice to Bidders, Terms and Conditions, and the instructions printed on the forms is necessary. All designations and prices shall be fully and clearly set forth. All blank spaces in the proposal forms shall be suitably filled in. For the convenience of Bidders, extra sets of proposal forms are available at no cost and on demand, at the Information Systems Department, City of Manchester, State of New Hampshire.

E. Signatures on Proposal Forms

Each proposal must give the full business address of the Bidder and be signed by him with his usual signature. Proposals by partnerships must furnish the full names of all partners and must be signed with the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and title of the person signing. Proposals by corporations must be signed with the legal name of the corporation, followed by the state of incorporation and by the signature and title of the president, secretary, or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below the signature. A proposal by a person who affixes to his signature the word "president", "secretary", "agent", or other title without disclosing his principal may be held to be the proposal of the individual signing. When requested by the Director of Information Services, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished.

F. Sealed and Marked

Proposals, with the required bid security, must be securely sealed in a suitable envelope, addressed and marked on the outside as follows:

Sealed Proposal Invitation **IS-0602**
City of Manchester
Information Systems Department
100 Merrimack Street
Manchester, NH 03101-2210

The City of Manchester is not responsible for proposals not properly marked.

G. Bid Security

Bid security, in the form of a bid bond, deposit of cash, or certified check, bank cashier's or bank official's check drawn on a solvent bank, payable to the "City Finance Officer, City of Manchester" in the amount of NOT LESS THAN TEN PERCENT (10%) of the total amount of the bid (before cash discount and/or trade-in) **must** accompany each proposal as a guarantee that if the proposal is accepted a Contract will be entered into. Such bid deposits of all Bidders will be held by the City of Manchester until all proposals submitted shall have been canvassed and the proposals have either been rejected in whole or in part or the award of the Contract or Contracts has been made. The bid deposit of the successful Bidder will be held until a Contract is duly executed. Bid deposits will be returned to unsuccessful Bidders within one (1) week after award of the Contract. If the successful Bidder to whom a Contract shall have been awarded refuses to execute the contract and to furnish the performance and payment bonds herein described, within ten (10) working days after award of the Contract, the amount of the bid deposit shall be forfeited to and retained by the City of Manchester as liquidated damages for such neglect or refusal.

H. Interpretations

No oral interpretations will be made to any Bidder as to the meaning of the specifications or terms and conditions of this Sealed Proposal Invitation. Every request for such interpretation or requests for a change in the specifications or terms and conditions shall be made in writing and addressed and forwarded to Micro-Computing/Networking Manager, 100 Merrimack Street, City of Manchester, State of New Hampshire, five (5) or more working days before the date fixed for the opening of proposals. Every interpretation made to a Bidder will be in the form of an addendum to the Sealed Proposal Invitation, which, if issued, will be sent as promptly as practicable to all persons to whom the Sealed Proposal Invitations have been issued. All such addenda shall become a part of the Sealed Proposal Invitation.

I. Incomplete Proposals

Proposals that are incomplete, not properly endorsed, or signed, or otherwise contrary to these instructions may be rejected as informal by the Director of Information Services, City of Manchester, State of New Hampshire.

J. Conditional Proposals

Conditional proposals will not be accepted.

K. Alternative Proposals

Alternative proposals, which do not minimally conform to the specifications will not be accepted.

L. Taxes

As the City of Manchester is exempt from the payment of Federal Excise Taxes, all prices quoted herein are not to include these taxes.

M. Prices

All prices and delivery times quoted must be firm FOB destination, City of Manchester, State of New Hampshire, unless otherwise indicated by the City. TIME IS OF THE ESSENCE.

N. Inside Delivery

Quotations should include all charges for inside delivery, packing, crating, containers, etc. Unless otherwise stated by the Bidder, prices quoted will be considered as being based on inside delivery to the destination designated in this Sealed Proposal Invitation and to include all inside delivery and packing charges.

O. Unit Pricing

Prices shall be stated in units of quantities specified. In case of discrepancy in computing the amount of the proposal, the unit prices quoted will govern.

P. Price Reductions

It is understood and agreed that should any price reductions occur between the opening of this proposal and the delivery of any order, the benefit of any such reductions will be extended to the City.

Q. Compliance with Specifications

Unless otherwise stated by the Bidder, the proposal will be considered as being in strict accordance with the specifications outlined in this Sealed Proposal Invitation. References to a particular trade name, manufacturers' catalogue, or model number, are made for descriptive purposes to guide the Bidder in interpreting the requirements of the City. They should not be construed as excluding proposals on other types of materials, equipment, and supplies. However, the Bidder, if awarded a Contract, will be required to furnish the particular item referred to in the specifications or descriptions unless a departure or substitution is clearly noted and described in the proposal.

R. Penalties

It is understood and agreed, that, in the event of failure, on the part of the Bidder to indicate date of delivery and/or completion, delivery and/or completion will be made within thirty (30) days from date of notification. Should the successful Bidder fail to make delivery or complete Contract within time specified, the City reserves the right to make the purchase at the open market and charge any excess over Contract price to the account of the successful Bidder, who shall pay the same.

S. Delivery

1. The City, through the Director of Information Services, reserves the right to postpone the delivery date to allow for any change in operating conditions or for any other cause not now foreseen. In the event the City elects to exercise this right, all prices quoted pursuant to this Sealed Proposal Invitation will remain firm, and the City shall incur no additional obligation to the Contractor on account of any delay of delivery date ordered by the Director of Information Services.
2. The Contractor shall familiarize himself with the location and facilities for storage.
3. The City, through the Director of Information Services, reserves the right to divert delivery from one location to another, and to allow for any change in operating conditions or for any other cause not now foreseen and to proportion deliveries according to available storage facilities.
4. It is agreed that deliveries and/or completion are subject to strikes, lockouts, accidents, and acts of God.

T. Non-Collusion

The Bidder must certify that no official or employee of the City of Manchester, State of New Hampshire, is pecuniarily interested in the proposal or in the

Contract which the Bidder offers to execute or in the expected profits to arise there from, and that this proposal is made in good faith without fraud or collusion or connection with any other person submitting a proposal.

U. Withdrawal of Proposal

Proposals may be withdrawn upon written or faxed request received from Bidders prior to the time affixed for opening. Negligence on the part of the Bidder in preparing the proposal confers no right for the withdrawal of the proposal after it has been opened,. If any proposal is withdrawn after time and date specified, the Bidder shall forfeit his bid security as liquidated damages.

V. Basis of Award of Contract

1. The City of Manchester reserves the right to waive any informalities in proposals and to reject any and all proposals, wholly or in part, and to make awards in a manner deemed in the best interests of the City.
2. Proposals shall be evaluated and selection made on the basis of demonstrated competence and qualification for the services required at a fair and reasonable price. In addition to price, the following is a partial list of criteria which will be used in the evaluation process:
 - a) The ability, capacity, and skill of the Bidder to perform the Contract or provide the service required;
 - b) Whether the Bidder can perform the Contract or provide the service promptly, or within the time specified, without delay or interference;
 - c) The character, integrity, reputation, judgment, experience, and efficiency of the bidder;
 - d) The quality of performance of previous contracts or services;
 - e) The previous and existing compliance by the Bidder with laws and ordinances relating to the Contract or service;
 - f) The sufficiency of the financial resources and ability of the Bidder to perform the Contract or provide the service;
 - g) The quality, availability and adaptability of the supplies, or contractual services to the particular use required;
 - h) The ability of the Bidder to provide future maintenance and service for the use of the subject of the Contract;
 - i) The number and scope of conditions attached to the proposal.
3. The intent is to award the entire contract to one successful bidder. However, because of budget constraints or other reasons, the City of Manchester reserves the right to make awards on this proposal by item; or to accept all or part of the proposal or prices quoted.

W. Contract Agreement

The Contract Agreement will be in the form customarily employed by the City of Manchester and will incorporate the Notice to Bidders and Terms and Conditions

of this Sealed Proposal Invitation. A copy of the Contract Agreement is attached hereto.

X. Performance Bond

The successful Bidder will be required to furnish a bond or a certified check on a solvent bank, payable to the "City Finance Officer, City of Manchester" in the amount of one hundred percent (100%) of the total amount of the Contract as a guarantee of the faithful performance thereof.

Y. Indemnification and Insurance

1. The Bidder, if awarded an order or contract, agrees to protect, defend, and save the City harmless against any demand for payment for the use of any patented, material, process, article, or device that may enter into the manufacture, construction, or form a part of the work covered by either order or contract.
2. The Bidder, if awarded an order or contract, agrees to defend, indemnify, and save harmless the City of Manchester from all damages to life and property arising out of the performance of this Contract due to the Bidder's negligence, that of his employees, subcontractors, etc., or due to the negligence of the City of Manchester, its employees, representatives, agents, etc.
3. If, in the judgment of the Director of Information Services, any property is needlessly damaged by an act or omission of the Contractor or his employees, servants, or agents, the amount of such damages shall be determined by the Director of Information Services of the City of Manchester and such amount shall be deducted from any money due the Contractor or may be recovered from said Contractor in actions at law.
4. The City is relieved from all risks of physical loss or damages to the equipment including extra expenses resulting there from, during periods of transportation and installation.
5. The Contractor shall carry Comprehensive General Liability Insurance with limits not less than \$1,000,000 per occurrence for Bodily Injury and \$1,000,000 per occurrence for Property Damage and Automobile Liability Insurance with limits not less than \$1,000,000 per person and \$1,000,000 per occurrence for Bodily Injury and \$1,000,000 per occurrence for Property Damage Covering all work performed under this contract. Such insurance shall include the following:
 - a) All operations including use of all vehicles.
 - b) Contractual liability covering this contract.
6. "Personal" Injury coverage (in addition to "Bodily" Injury). The Contractor shall carry Worker's Compensation Insurance including Employers Liability Insurance as provided by the New Hampshire Revised Statutes Annotated, 1955, as amended, covering all work performed by him under this agreement.

7. Insurance similar to that required of the Contractor shall be provided by or on behalf of all subcontractors to cover their operations performed under this agreement. The Contractor shall be held responsible for any modifications in these insurance requirements as they apply to subcontractors.

Z. Insurance Certificates

1. Insurance certificates evidencing the above are to be furnished to the City at time of execution of the contract and shall provide for not less than 30 days prior notice to the City of any cancellation or major change in the policies.
2. The Department of Risk Management is to be furnished a copy of the policy or policies including any endorsements required to provide stated coverage within thirty (30) days after the location of any equipment and/or the starting of work on or at the project. No changes or alterations in the policies shall be made without the approval of the Risk Management Director.

AA. Assignment of Monies

The Contractor will not be permitted to either assign or underlet the Contract, nor assign either legally or equitably any monies hereunder, or its claim thereto, without the previous written consent of the City Finance Officer.

BB. Statutes and Ordinances

The Revised Statutes Annotated of the State of New Hampshire, the Charter of the City of Manchester, and all City Ordinances insofar as they apply to the laws of competitive bidding, contracts, and purchases, are made a part hereof.

CC. Guarantees

1. The Bidder to whom a Contract is awarded guarantees to the City of Manchester that all warranties of merchantability and fitness for a particular purpose as provided for in New Hampshire 382A-2-314 and 2-315 shall remain in force and will not be disclaimed.
2. The Bidder to whom a Contract is awarded guarantees to the City of Manchester that all items furnished under this Contract shall be free of defects in design, materials, and workmanship and for a period of one (1) year after final inspection and acceptance shall replace promptly any defective equipment, materials, and/or workmanship required without additional cost to the City.

DD. Assignment of Work

Assignment of any portion of the work by subcontract must be approved in advance by the Director of Information Services.

EE. Governing Law

This contract shall be construed according to the laws of the State of New Hampshire.

FF. Headings not Controlling

Headings used in this contract are for reference purposes only and shall not be deemed a part of this contract.

GG. Operating and Maintenance Manual

The Contractor shall prepare and deliver to the City, one copy of all operating and maintenance manuals for all equipment required for the project. The manuals shall contain full information for each item of mechanical, electrical, or other operating equipment and schematic diagrams of control systems

HH. Quality Control

Any material or operation specified shall comply with the published specification of a manufacturer, ANSI/TIA/EIA-758, The National Fire Protection Association (NFPA), The International Municipal Signal Association (IMSA) or other applicable standards. Should there be discrepancies among the referenced specifications or standards, the more stringent requirements shall govern.

II. Manufacturer's Directions

All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturers. Should there be a discrepancy between an installation as required by the drawings and/or specifications and the manufacturer's directions and/or recommendations, such discrepancy shall be brought to the attention of Micro Computing/Networking Manager and shall be resolved before the work may proceed.

JJ. Approved Material Requirements

In the event the mechanical and/or electrical requirements of any "APPROVED" material is different from that specified and/or as indicated on the drawings, any additional cost involved shall be the responsibility of the Contractor. No extra cost to the City will be allowed because of the use of such material.

KK. Examination Surfaces and/or Conditions

All contractors shall examine all surfaces on which or against which their work is to be applied and shall notify Micro Computing/Networking Manager in writing of any defects that they may discover which, in their opinion, would be detrimental to the proper installation or operation of their products.

LL. Acceptance Criteria

The City of Manchester reserves the right to reject the items delivered under this contract as not conforming to the specifications unless the following performance criteria are met:

1. Equipment must be installed and tested to the satisfaction of the City Communications Superintendent and Micro Computing/Networking Manager with test results delivered to the Information Systems Department.
2. Physical delivery does not constitute acceptance.
3. The condition of all work areas at completion must be acceptable to the City Communications Superintendent.
4. All fiber must be tested and be acceptable to the City Communications Superintendent.

MM. Method of Payments

Payment shall be made not earlier than fifteen (15) days nor longer than forty-five (45) days after receipt of acceptable invoices as specified below. Invoices will be forwarded to the City of Manchester, Information Systems Department; 100 Merrimack Street; Manchester, NH 03101-2210.

EACH RUN WILL BE ELIGIBLE FOR PAYMENT AS FOLLOWS;

20% - after the entire fiber route has been verified and conduit runs have been roped, rodded and innerduct has been installed where needed.

70% - after acceptance of the fiber installation and termination.

10% - 30 days after the fiber is available for operations, receipt of testing results, acceptable labeling of all fiber strands is provided and all requirements of the run in this contract including any clean up is complete.

II TECHNICAL SPECIFICATIONS

A. Outside-Plant Preparation and Safety

1. The Contractor will work with Fire Communications personnel throughout the outside plant installation. The Contractor will also be responsible for Police details while working in City streets.
2. All vehicles used by contractor in outside construction shall have an amber rotating light affixed to the vehicle in such a way that is visible for 360°. The light shall be in operation during all work periods.
3. High visibility cones and manhole barriers shall be placed as needed at the point of operation to warn oncoming traffic and pedestrians. All cable reel stands shall have a person in attendance at all times.
4. All personnel working in manholes shall be trained for this type of work. Manhole atmosphere must be tested before entering according to OSHA requirements.
5. All underground (duct) cable splice locations shall be approved by the City Communications Superintendent and must remain accessible in the manhole after the cable is secured.
6. All underground (duct) cable shall be installed by hand pulling or with a variable speed winch approved for this application by the City Communications Superintendent.
7. It is the contractor's responsibility to ensure that ducts are rodded and roped and innerduct is installed prior to installation of cable. A new pull tape will be added to replace existing rope used. All duct blockages shall be reported to the City Communications Superintendent immediately. No cable shall be installed until the entire duct run is found to be clear.
8. The Contractor shall supply a cost per foot for all excavation work required during the course of the project. This cost will not include any ductwork specified as part of the specifications. The City will use the cost per foot amount in all authorizations to repair damaged or missing ducts and risers. Dig Safe shall be notified before any excavation. All excavation, installation and surface restoration shall meet all requirements of the City of Manchester Highway Department.
9. Risers and sweeps at the pole and any conduit exposed to the elements will be waterproof rigid conduit for exterior applications. All other buried conduit can be schedule 40 and sized to meet existing construction.
10. All required permits should be taken by the contractor. There normally is no charge for City permits for work done for the City.

B. Fiber Optic Cable Installation

1. Most of the fiber cable will be as follows: single mode fiber optic loose tube cable with the minimum amount of strands as indicated in run specifications. (*see Hardware Requirements for detailed description*)
2. Conduits and innerducts will be clear of all dirt, foreign matter, water and debris before installing cable.
3. Cables should be fed directly in by hand or over large diameter bends to prevent kinks, small bends, sharp edges and crossovers.
4. Vendor must comply with the manufacturer's recommended installation temperature, pulling tension and bend radius.
5. The pulling tension should be continuously monitored to assure that the maximum recommended load is not exceeded. If the expected loads are close to maximum, additional pull boxes should be considered and/or the use of lubricants compatible with the outer jacket material of the cable.
6. Cable should be fed out of each pull box in a fashion that minimizes bends. Sufficient slack should be left so that each cable may be trained to it's final location free of stress and completely clear of manhole openings.
7. Sectionalize with innerduct whenever possible. Innerduct should be as straight as possible and should be 1.5" diameter single-walled unless otherwise specified.
8. Provide service loops in various locations to provide sufficient slack in the event that a repair becomes necessary. The longest manhole run or longest aerial span will determine these service loop lengths. Wrapping will be done as directed in the field.
9. All pull tape, manhole hardware and pole hardware must be provided by the contractor.
10. Aerial fiber will be placed on the poles with existing fire signal wire as directed by the Fire Communications Division. Any span without Fire signal wire or with self-supporting C-wire will require new messenger cable provided by the contractor. Do not lash Fiber to other C-Wire.
11. Termination cabinets and/or couplings will be provided at all locations by the contractor. (*see Specific Requirements below which indicates new cabinet or adding to existing cabinet*)
12. Termination supplies, splicing kits and splicing enclosures will be provided by the contractor to meet the customer's needs.

C. Specific Requirements

1. **RUN #1** (*City Hall East to Fire Station 2*)

- a) Install 144-strand single-mode fiber from the City Hall East at One City Hall Plaza to Fire Station 2 The run is as follows:
 - (1) **(Termination 144 strands in new fiber rack tray)** beginning in telco room of City Hall East at One City Hall Plaza, then via conduit out to Elm Street.
 - (2) Turn left northerly up Elm Street to Mechanic Street underground.
 - (3) Turn left down Mechanic Street to Plaza Drive underground.
 - (4) **(Loop out 24 strands for Fire Station 2-See Run #4)** Turn right with 120 strands northerly up Plaza Drive to Bridge Street Bridge underground.
 - (5) Turn left under Bridge Street Bridge which is a straight shot through to Fire Station 6 at 134 Amory Street underground.
 - (6) **(Termination 24 strands in new fiber cabinet)** Fire Station 6 at 134 Amory Street in Telco Room.
 - (7) Continue up Amory Street with remaining 96 strands turning left onto Rimmon Street aerial.
 - (8) Continue southerly on Rimmon Street to Putnam Street aerial.
 - (9) Turn left onto Putnam Street until the Riser Pole for CMC Hospital. **(Termination 12 Strands in new fiber cabinet)**
 - (10) Continue out to McGregor Street turning right with remaining 84 strands aerial.
 - (11) Turn right onto Douglas Street and loop out 36 strands at the 151 Douglas riser pole.
 - (12) Continue with 48 strands westerly on Douglas Street to West Street aerial.
 - (13) Turn left on West Street southerly to Parker Street aerial.
 - (14) Turn left on Parker Street to South Main Street aerial.
 - (15) Turn right on So. Main South aerial.
 - (16) At South Main and Walker Street leave loop of 36 strands for Police at riser pole and procede underground.

(17) Continue down South Main with remaining 12 strands underground to Goff Street riser and then aerial to Fire Station 2 at 527 South Main Street. **(Termination 12 Strands in new fiber cabinet)**

- b) Install innerduct wherever possible for the underground portion of the fiber optic cable run.
- c) Contractor will provide City preapproved fiber cabinets, loaded adapter plates and terminate with SC connectors or splicing as specified at all locations.
- d) Records of splice description and location will be provided to the Information Systems Department. *(location of all splices must be approved by City prior to installation)*

Installation Notes:

Cable between One City Hall Plaza and 134 Amory Street

Cable name = **CHE-3/FS2**

MH = Maintenance Hole (Manhole)

Pole = Utility pole

⊙ = Innerduct required

underground = City conduit

DISCLAIMER

All run layouts; distances and pole and conduit references have been made to the best of our ability to provide information needed to make a more accurate quote. The contractor must verify run specifications and is responsible for making any needed corrections. If route changes are required, the Communications Superintendent and the Micro Computing/Networking Manager must approve them.

2. **RUN #2** (*Rine Center to City Hall East*)

- a) Install 48-strand single-mode fiber from the Rine Center at 1528 Elm Street to City Hall East at One City Hall Plaza. The run is as follows:
 - (1) **(Termination 48 strands in new fiber cabinet)** in the 1528 Elm Street Rine Center Computer Room with conduit out of the building underground to Elm Street. (MH)
 - (2) Turn right underground down Elm Street to intersection of City Hall East at One City Hall Plaza. (MH)
 - (3) City Hall East at One City Hall Plaza Telco Room **(Termination 48 strands in new fiber rack tray)**
 - (4) Or using the best route to be determined or possibly using current fiber run of 18 strands as pull to be replaced with 48 strands.
- b) Install innerduct wherever possible for the underground portion of the fiber optic cable run.
- c) Contractor will provide City preapproved fiber cabinets, loaded adapter plates and terminate with SC connectors or splicing as specified at all locations.
- d) Records of splice description and location will be provided to the Information Systems Department. (*location of all splices must be approved by City prior to installation*)

Installation Notes:

Cable between 1528 Elm St and One City Hall Plaza Cable name = **CHE-3/RIN-3**

MH = Maintenance Hole (Manhole)

Pole = Utility pole

⊙ = Innerduct required

underground = City conduit

DISCLAIMER:

All run layouts; distances and pole and conduit references have been made to the best of our ability to provide information needed to make a more accurate quote. The contractor must verify run specifications and is responsible for making any needed corrections. If route changes are required, the Communications Superintendent and the Micro Computing/Networking Manager must approve them.

3. **RUN #3** (*Information Systems Dept. to City Hall East*)
 - a) Install 96-strand single mode fiber from the Information Systems Department at 100 Merrimack Street to City Hall East at One City Hall Plaza. The run is as follows:
 - (1) **(Termination 96 strands in new fiber cabinet)** at Information Systems computer room .
 - (2) From Central Fire Station on 100 Merrimack Street underground to Pine Street and Merrimack Street.
 - (3) Turn right onto Merrimack Street underground to riser pole on Chestnut Street
 - (4) Turn right onto Chestnut Street to Monadnock Street aerial.
 - (5) Continue on Monadnock Street to Western Union Duct underground.
 - (6) Continue west on Monadnock Street to Nutfield Lane underground.
 - (7) Turn right at Nutfield Lane and then left onto Manchester Street underground.
 - (8) Turn right onto Elm Street and left into City Hall East underground.
 - (9) City Hall East at One City Hall Plaza Telco Room **(Termination 96 strands in new fiber rack tray)**
 - b) Install innerduct wherever possible for the underground portion of the fiber optic cable run.
 - c) Contractor will provide City preapproved fiber cabinets, loaded adapter plates and terminate with SC connectors or splicing as specified at all locations.
 - d) Records of splice description and location will be provided to the Information Systems Department. (*location of all splices must be approved by City prior to installation*)

Installation Notes:

Cable between One City Hall Plaza and 100 Merrimack Street

Cable name = **CHE-5/FCE-2**

MH = Maintenance Hole (Manhole)

Pole = Utility pole

⊙ = Innerduct required

underground = City conduit

DISCLAIMER:

All run layouts; distances and pole and conduit references have been made to the best of our ability to provide information needed to make a more accurate quote. The contractor must verify run specifications and is responsible for making any needed corrections. If route changes are required, the Communications Superintendent and the Micro Computing/Networking Manager must approve them.

4. **RUN #4**(*SPLICE POINT of Mechanic St. to SLICE POINT of Walker St.*)

- a) Begin at SPLICE POINT of RUN#1 on the intersection of Mechanic Street and Plaza Drive to Fire Station 2 at 527 South Main Street. The run is as follows:
 - (1) Continue down Mechanic street with the 24 strands.
 - (2) Turn left southerly down Bedford Street to Granite Street underground.
 - (3) Turn right onto Granite Street Bridge to South Main Street underground.
 - (4) Turn left southerly onto South Main Street to Walker St. riser pole and splice the 24 strands looped.
- b) Install innerduct wherever possible for the underground portion of the fiber optic cable run.
- c) Contractor will provide City preapproved fiber cabinets, loaded adapter plates and terminate with SC connectors or splicing as specified at all locations.
- d) Records of splice description and location will be provided to the Information Systems Department. (*location of all splices must be approved by City prior to installation*)

Installation Notes:

Cable between One City Hall Plaza and 527 South Main Street

Cable name = **CHE-3/CHE-3**

MH = Maintenance Hole (Manhole)

Pole = Utility pole

⊙ = Innerduct required

underground = City conduit

DISCLAIMER:

All run layouts; distances and pole and conduit references have been made to the best of our ability to provide information needed to make a more accurate quote. The contractor must verify run specifications and is responsible for making any needed corrections. If route changes are required, the Communications Superintendent and the Micro Computing/Networking Manager must approve them.

5. **RUN #5***(Fire Station 5 to Rine Center)*

- a) Install 12-strand single-mode fiber from the Rine Center at 1528 Elm Street to Fire Station 5 at 55 Webster Street. The run is as follows:
- (1) **(Termination 12 strands in existing cabinet)** in the 1528 Elm Street Rine Center Computer Room with conduit out of the building underground to Elm Street.
 - (2) North on Elm Street to Sagamore Street underground.
 - (3) Right onto Sagamore Street to Eastback underground.
 - (4) Left onto Eastback to Webster Street underground.
 - (5) Right onto Webster Street to Bay Street underground.
 - (6) Fire Station 5 Telco Room **(Termination 12 strands in new fiber cabinet)**
- b) Install innerduct wherever possible for the underground portion of the fiber optic cable run.
- c) Contractor will provide City preapproved fiber cabinets, loaded adapter plates and terminate with SC connectors or splicing as specified at all locations.
- d) Records of splice description and location will be provided to the Information Systems Department. *(location of all splices must be approved by City prior to installation)*

Installation Notes:

Cable between 1528 Elm Street and 55 Webster Street

Cable name = **RIN-1/FS5-1**

MH = Maintenance Hole (Manhole)

Pole = Utility pole

⊙ = Innerduct required

underground = City conduit

DISCLAIMER:

All run layouts; distances and pole and conduit references have been made to the best of our ability to provide information needed to make a more accurate quote. The contractor must verify run specifications and is responsible for making any needed corrections. If route changes are required, the Communications Superintendent and the Micro Computing/Networking Manager must approve them.

6. **RUN #6***(Fire Station 3 to Splice Point at Brown Ave)*

- a) Splice 12 strands single-mode fiber from the Brown Avenue Loop and bring to Fire Station 3 at 2033 South Willow Street. The run is as follows:
- (1) **(Termination 12 dark strands)** in the Fire Station 3 Telco Room.
 - (2) From Fire Station 3 underground across So. Willow Street to riser pole.
 - (3) Continue northerly on South Willow Street aerial to Goffs Falls Road aerial.
 - (4) Turn left westerly on Goffs Falls Road and continue aerial for approx. .8 mile to underground.
 - (5) Continue to riser pole approx. .1 mile to aerial and continue on Goffs Falls Road.
 - (6) At top of hill, turn right onto paved walking path to Brown Avenue aerial.
 - (7) Continue to Splice Point on Brown Ave. just before highway overpass.
 - (8) Splice 12 fiber strands cable of red sheath that go to 100 Merrimack Street at the Information Systems Dept. computer room. **(Termination 12 dark strands in existing fiber tray)**
- b) Install innerduct wherever possible for the underground portion of the fiber optic cable run.
- c) Contractor will provide City preapproved fiber cabinets, loaded adapter plates and terminate with SC connectors or splicing as specified at all locations.
- d) Records of splice description and location will be provided to the Information Systems Department. *(location of all splices must be approved by City prior to installation)*

Installation Notes:

Cable between 100 Merrimack St. and 2033 South Willow Street

Cable name = **FCE-2/FS3-1**

MH = Maintenance Hole (Manhole)

Pole = Utility pole

⊙ = Innerduct required

underground = City conduit

DISCLAIMER:

All run layouts; distances and pole and conduit references have been made to the best of our ability to provide information needed to make a more accurate quote. The contractor must verify run specifications and is responsible for making any needed corrections. If route changes are required, the Communications Superintendent and the Micro Computing/Networking Manager must approve them.

7. **RUN #7**(*Fire Station 10 to Fire Station 7 via Elliott Hospital*)
- a) Install 36 single mode fiber strands from Fire Station 10 at 630 Mammoth Road to Fire Station 7 at 679 Sommerville Street . The run is as follows:
 - (1) **(Termination 36 strands in existing fiber cabinet)** in the Telco Room at Fire Station 10 in existing fiber can.
 - (2) Run the 36 strand cable southerly down Mammoth Road to veering right onto Tarrytown road to Auburn Street aerial.
 - (3) Turn left on Auburn Street until Elliott Hospital riser pole to enter Elliot Hospital. **(Termination 12 strands in new fiber cabinet)**
 - (4) Continue back out onto Auburn Street with 24 strands aerial.
 - (5) Turn left westerly back out on Auburn Street to Cypress Road aerial.
 - (6) Turn left on Cypress Street to Sommerville Street aerial.
 - (7) Turn right onto Sommerville Street aerial.
 - (8) **(Termination 24 strands in existing fiber cabinet)** in the Telco room of Fire Station 7 at 679 Sommerville Street.
 - b) Install innerduct wherever possible for the underground portion of the fiber optic cable run.
 - c) Contractor will provide City preapproved fiber cabinets, loaded adapter plates and terminate with SC connectors or splicing as specified at all locations.
 - d) Records of splice description and location will be provided to the Information Systems Department. (*location of all splices must be approved by City prior to installation*)

Installation Notes:

Cable between 630 Mammoth Road and One Elliot Way

Cable name = **F10-1/FS7-1**

Cable between One Elliot Way and 679 Sommerville Street

Cable name = **ELL/FS7-1**

MH = Maintenance Hole (Manhole)

Pole = Utility pole

⊙ = Innerduct required

underground = City conduit

DISCLAIMER:

All run layouts; distances and pole and conduit references have been made to the best of our ability to provide information needed to make a more accurate quote. The contractor must verify run specifications and is responsible for making any needed corrections. If route changes are required, the Communications Superintendent and the Micro Computing/Networking Manager must approve them.

8. **RUN #8**(District Court to One City Hall Plaza)
- a) Install 12 single mode fiber strands from Manchester District Court 35 Amherst Street to East City Hall at One City Hall Plaza. The run is as follows:
- (1) **(Termination 12 strands in existing fiber tray)** in the Telco Room at One City Hall Plaza
 - (2) Out of East City Hall to Elm Street.
 - (3) North on Hanover Street to the 1st alley on the left.
 - (4) Continue down alley and turn right onto 2nd alley and continue until reaching the Manchester District Court back entrance point.
 - (5) **(Termination 12 strands in new fiber cabinet)** in the Telco room of the Manchester District Court building.
- b) Install innerduct wherever possible for the underground portion of the fiber optic cable run.
- c) Contractor will provide City preapproved fiber cabinets, loaded adapter plates and terminate with SC connectors or splicing as specified at all locations.
- d) Records of splice description and location will be provided to the Information Systems Department. *(location of all splices must be approved by City prior to installation)*

Installation Notes:

Cable between One City Hall Plaza and 35 Amherst Street

Cable name = **CHE-3/MDC-1**

MH = Maintenance Hole (Manhole)

Pole = Utility pole

⊙ = Innerduct required

underground = City conduit

DISCLAIMER:

All run layouts; distances and pole and conduit references have been made to the best of our ability to provide information needed to make a more accurate quote. The contractor must verify run specifications and is responsible for making any needed corrections. If route changes are required, the Communications Superintendent and the Micro Computing/Networking Manager must approve them.

D. Hardware Requirements

1. The fiber to be installed is fiber optic loose tube cable, non-ul, consisting of 8.3 single mode fibers, outdoor gel filled with a poly-olefin jacket or equivalent product to HITACHI cable p/n 60090-24 or KRONE cable p/n Q024LTSDNA010. *Provided by contractor*
2. SMP Termination cabinets and SC loaded adapter plates as preapproved by the City for each location. Some existing fiber cabinets have enough room to terminate the new fiber, but others do not and will need new cabinets. *Provided by contractor*
3. (2) Splicing kits and supplies to splice 12 strand groups as indicated. (2 fiber cabinets come with splicing trays) *Provided by contractor*
4. Splicing containers and supplies as required for manhole and aerial splices. *Provided by contractor*
5. The innerduct will be 1.5" single-wall or equivalent product to Eastern p/n PDCC1500F. The contractor is responsible for specifying the quantity of inner-duct required. *Provided by contractor*
6. 1/4" Messenger wire where required, all pole hardware and all manhole hardware needed to complete the installation. *Provided by contractor*
7. Pulling tape: flat-type, Kevlar weave. *Provided by contractor*
8. All other materials will be provided by the successful contractor.

E. Testing

1. All fibers will be tested as described in (E.4.) and upon completion the results will be provided to the Information Systems Department.
2. All fiber strands will be clearly labeled at each end for identification.
3. Splicing-installation Test. Identify any cable damage resulting from the installation process. Obtain a splice-loss verification before splice enclosures are permanently mounted.
4. Acceptance Test. The following information will be recorded at all operating wavelengths and must be accepted by the Information Systems Department.

Total loss Attenuation per mile or kilometer

Total fiber trace

Splice loss and connector loss

Total link length from cable markings

Total link length as indicated by OTDR

Measurement direction and wavelength

REFERENCES

List those customers to whom you have supplied similar services as proposed.

<u>Company</u>	<u>Address</u>	<u>Person's Name</u>	<u>Telephone</u>
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III SCHEDULE – PRICE DATA

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Price</u>
Run # 1	Fire Station 2 to City Hall East		

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Price</u>
Run # 2	Rine Center to City Hall East		

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Price</u>
Run # 3	Information Systems to City Hall East		

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Price</u>
Run # 4	Splice Point on Mechanic Street to Splice Point on Walker Street		

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Price</u>
Run # 5	Fire Station 5 to Rines Center		

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Price</u>
Run # 6	Fire Station 3 to Splice Point Brown Ave.		

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Price</u>
Run # 7	Fire Station 10 to Fire Station 7 via Elliott Hospital		

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Total Price</u>
Run # 8	Manchester District Court to One City Hall Plaza		

V PROPOSAL FORM

TO: Diane S. Prew
Director, Information Services
City of Manchester
State of New Hampshire

In compliance with the invitation for proposals to furnish supplies, materials, equipment, and services on the accompanying schedules, the undersigned _____
_____ a corporation organized and existing under the laws of the State of _____
_____ or a general partnership consisting of _____
_____ of _____ City of _____
_____ State of _____ hereby proposes to furnish,
within the time specified in the Request for Proposals, the supplies, materials, equipment, and services at the prices stated opposite the respective items listed on the SCHEDULE.

Upon receipt of written notice of the acceptance of this proposal, the undersigned will, if required, execute a form of contract in accordance with the proposal as accepted and give bonds, with good and sufficient surety or sureties, for the faithful performance of the Contract, and for payment for labor and materials, within ten (10) days after the prescribed forms are presented for signature.

Discount will be allowed for receipt of prompt payment as follows:

within _____ calendar days, _____ percent (____ %);

within _____ calendar days, _____ percent (____ %);

within _____ calendar days, _____ percent (____ %);

Time, in connection with discount offered, will be computed from date of completion and/or delivery and acceptance at destination, or from date correct bill or voucher properly certified by the Contractor is received if the latter date is later than the date of completion and acceptance and/or delivery and acceptance

Deliveries are to be made to: _____.

Delivery and/or completion to be made within _____ days from the date of notification by the City. TIME IS OF THE ESSENCE.

If the undersigned fails to perform any of the promises made herein, the proposal security, which is deposited with the _____ shall be paid to the City of Manchester or payment of the bond herewith deposited will be enforced for the benefit of the City of Manchester as liquidated damages for such default; otherwise the proposal security will be returned to the undersigned.

The undersigned as Bidder, declares that only parties interested in the proposal as principals are named herein; and that this proposal is made without collusion with any other person, firm or corporation; that no officer or agent of the City is directly or indirectly interested in this proposal; and he proposes and agrees that if this proposal is accepted he will contract with the City in accordance with the Specifications, and the Terms and Conditions as spelled out in this Sealed Proposal.

Dated _____, 20____.

Authorized Signature of Bidder & Title

(please print or type name of Bidder & Title)

Address

Full names and addresses of all persons interested in this proposal as principals are as follows:

<u>NAME</u>	<u>ADDRESS</u>
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IV SAMPLE CONTRACT

INFORMATION SYSTEMS DEPARTMENT
THE CITY OF MANCHESTER
NEW HAMPSHIRE 03101

CONTRACT

Sealed Proposal IS-0602

Agreement made _____ 2006 between the City of Manchester, a municipal corporation of the State of New Hampshire, herein referred to as "City", and _____ of _____, City of _____, State of _____ herein referred to as "Contractor".

For the considerations set forth herein, the parties agree as follows:

_____ being selected as the most appropriate Bidder, shall provide to the City the following supplies, materials, equipment, and services:

SEE PURCHASE ORDER: _____

Such supplies, materials, equipment, and services shall be provided in accordance with the proposal made by _____, pursuant to the Notice To Bidders, the Terms and Conditions contained in this Sealed Proposal Invitation, and the procedures established by the City's Procurement Code section 20 1/2-4, which is hereby incorporated by reference and made a part hereof as if set forth herein in full.

The City shall pay _____ the price and amount set out in the Contractor's bid on delivery to and acceptance by the City of the supplies, materials, equipment, and services herein described, and on filing by _____ and approval by the City of a verified claim for the amount due.

The agreement shall be inoperative during such period of time as delivery or acceptance may be rendered impossible by reason of fire, strike, act of God, government regulations, or other cause beyond the control of either party.

This agreement shall be binding on the assigns and successors of the parties.

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS AGREEMENT AT THE INFORMATION SYSTEMS DEPARTMENT THE DAY AND YEAR FIRST ABOVE WRITTEN.

Signature

Diane S. Prew

Director, Information Services

Signature

Typed Name

Title

Acknowledged by:
